

**Determination of the Climatic Fluctuations Effects on Olive Trees with the Dendroclimatological Research  
in Izmir – Kemalpaşa Region**

<b>Research Area</b>	A 13 - Soil Water Resources and Environment
<b>Research Program</b>	P-01 Agriculture-Climate Change Interaction
<b>Executive Institute</b>	International Agricultural Research and Training Center (IARTC) - TAGEM
<b>Supporting Institute/s</b>	Olive Research Station - TAGEM
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<b>Research Period</b>	2014-2018
<b>Project Summary:</b> Today, existence of the seasonal fluctuation in climatic parameters due to various reasons has been proven with numerous researches. In this study; potential for determining and preventing of the size of negative effects of the seasonal fluctuation, which is seen in almost all sectors particularly in agriculture with its positive and negative effects, on some phenological and physiological growth parameters of olive plants in Izmir-Kemalpaşa olive orchards in Aegean Region is investigated. The study is carried out in two parts. The olive trees over a certain age with the same climatic and growing conditions and the same kind of new planted olive trees is observed in terms of phenological and physiological parameters with use stem radius variations for five years and the results is compared with the meteorological data. The dendroclimatological analysis using the tree ring age and stable isotope ratios ( $\delta^{18}\text{O} / ^{16}\text{O}$ ) will be applied to the old trees to observe the effects of the climatic fluctuations in previous years then the results will be compared with the meteorological data of the same period. At the end of the research; if there is some negative effects of long period climatic fluctuations on olive cultivars in Izmir / Kemalpaşa region; prevent or reduction practice of these will be explored.	
<b>Key words:</b> Climatic fluctuations, dendroclimatology, olive, climate, meteorology, phenology, physiology.	